

C¹ cont.
etching any unreacted silicon from said silicon cap layer.

4. (Amended) A method for fabricating a silicide for a silicon region, said method comprising:

C²
depositing a metal containing silicon or a metal alloy on a bulk silicon substrate;

reacting said metal containing silicon or said alloy to form a first silicide phase;

etching any unreacted metal containing silicon or alloy;

depositing a silicon cap layer over said first silicide phase;

reacting the silicon cap layer to form a second silicide phase; and

etching any unreacted silicon from said silicon cap layer.

10. (Amended) A method for fabricating a silicide for a silicon region, said method comprising:

depositing a metal or a metal alloy on a bulk silicon substrate;

reacting said metal or said alloy to form a first silicide phase;

C³
etching any unreacted metal or alloy;

depositing a silicon cap layer over said first silicide phase;

reacting the silicon cap layer to form a second silicide phase; and

etching any unreacted silicon from said silicon cap layer,

wherein said metal is co-deposited with silicon.

13. (Amended) A method for fabricating a silicide, said method comprising:

C⁴
providing a substrate having a silicon layer;

depositing a metal containing silicon or a metal alloy over said silicon layer;

reacting said metal containing silicon or said alloy to form a first silicide phase;

CH
cont.

etching any unreacted metal containing silicon or alloy; and
depositing a silicon cap layer over said metal containing silicon or said alloy;
reacting the silicon cap layer, to form a second silicide phase; and
etching any unreacted silicon from said silicon cap layer.

25. (Amended) A method for fabricating a silicide for a semiconductor device, said method comprising:

C5

depositing a metal containing silicon or a metal alloy on a silicon substrate;
reacting said metal containing silicon or said alloy to form a first forming silicide phase;
etching any unreacted metal or alloy;
depositing a silicon cap layer over said first forming silicide phase;
reacting the silicon cap layer to form a second silicide phase, for said semiconductor device; and
etching any unreacted silicon from said silicon cap layer.

26. (Amended) A method for fabricating a silicide for a silicon region, said method comprising:

depositing a metal containing silicon or a metal alloy on a bulk silicon substrate;
reacting said metal containing silicon or said alloy to form a first silicide phase;
etching any unreacted metal containing silicon or alloy;
depositing a silicon cap layer over said first silicide phase;

C⁵ cont. reacting the silicon cap layer to form a second phase; and
etching any unreacted silicon from said silicon cap layer, wherein said metal is nickel.

Please add the following new claims:

D^m 27. The method of claim 1, wherein said first silicide phase comprises a silicon-rich phase.

28. The method of claim 1, wherein said depositing said metal containing silicon or said metal alloy is for extending a temperature window in which a silicide metal-rich phase exists.

D^H 29. The method of claim 4, wherein said first silicide phase comprises a silicon-rich phase.

C⁶ 30. The method of claim 4, wherein said depositing said metal containing silicon or said metal alloy is for extending a temperature window in which a silicide metal-rich phase exists.

D^S 31. The method of claim 10, wherein said first silicide phase comprises a silicon-rich phase.

32. The method of claim 10, wherein said depositing said metal containing silicon or said metal alloy is for extending a temperature window in which a silicide metal-rich phase exists.

D⁶ 33. The method of claim 13, wherein said first silicide phase comprises a silicon-rich phase.